

**STORAGE MEDIA SCANNER APPARATUS AND METHOD  
PROVIDING MEDIA PREDICTIVE FAILURE ANALYSIS AND  
PROACTIVE MEDIA SURFACE DEFECT MANAGEMENT**

**ABSTRACT**

A method, computer readable medium, apparatus and RAID controller for performing nondestructive write testing is disclosed. For data storage devices divided into sectors, the present invention performs nondestructive write testing by writing data to the sectors, reading data written to the sectors, and comparing the data written to the data read to detect errors. To increase efficiency, sectors previously written by a host or other computer are tracked, allowing sectors not previously written to be tested without saving and restoring data in the sectors. To locate the sectors written to by the host computer, write indicators such as a sector written indicator, a sector stripe written indicator, and a stripe written indicator are maintained. Upon detecting a defective sector, a new sector is allocated, and the defective sector is replaced by the allocated sector.